



RECOMMENDATIONS FOR INFECTION CONTROL & PREVENTION OF COVID-19: MEDICAL DIRECTORS IN FACILITIES SERVING OLDER ADULTS

Last updated 4/15/2020

DELAWARE DEPARTMENT OF HEALTH & SOCIAL SERVICES



ACKNOWLEDGEMENT: DPH IS GRATEFUL TO THE
MEMBERS OF THE LTC TASK FORCE FOR THEIR
ASSISTANCE IN CREATING GUIDANCE FOR FACILITY
MEDICAL DIRECTORS

DELAWARE DEPARTMENT OF HEALTH & SOCIAL SERVICES

OBJECTIVES

Review General Guidelines related to:

- Overview of SARS-CoV-2 and Coronavirus disease 2019 (COVID-19)
- Review of isolation precautions
- Review of Hand Hygiene
- Review PPE Usage (Video, Doffing, and Surgical Mask Recommendations/Use)
- Review of cross contamination (video)
- Provide SHOC and DHSS Resources



COVID-19 UPDATE - DISCLAIMER

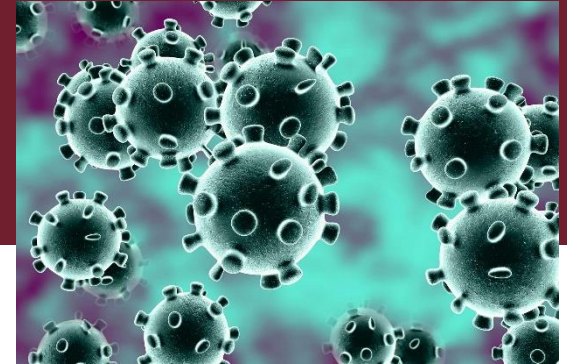
- The situation is rapidly evolving, including information on Coronavirus disease 2019 (COVID-19).
- Presentation is based on most up-to-date knowledge.



DISCLAIMER



CORONAVIRUSES



<https://www.webmd.com>

- Enveloped virus
- Spread by contact with infected secretions or by droplets
- Survivability outside the body
 - Detection of viral RNA is not a perfect surrogate for infectivity

Survivability
dependent on
temperature,
humidity,
inoculation size,
etc.



TRANSMISSION

- Suspected contact and droplet transmission
 - Limited airborne transmission with aerosol-generating procedures
- Confirmed person-to-person spread occurring
 - Primarily among prolonged close contacts and household members
 - Does not appear to be through casual contact
 - Spread by asymptomatic individuals
- Risk factors for acquisition unknown and under investigation
- Infectious period unknown at this time
 - Detection of viral RNA does not necessarily mean detection of infectious virus
 - Unknown if more severe disease indicates prolonged infectious period



EPIDEMIOLOGY

- Early information suggest incubation period of ~5 days (range 2-14 days)
- Those at risk of severe illness
 - Older age (65 years and older)
 - Presence of chronic medical conditions (e.g., diabetes, cardiovascular disease, chronic lung disease, chronic renal disease, liver disease)
 - Immunocompromised
 - Residence in nursing home or long-term care facilities



CLINICAL PRESENTATION

- Wide clinical spectrum, from mildly ill to severe disease
 - For mild illness, presentation may show as non-specific respiratory signs and symptoms usually seen in viral respiratory infections
 - Usually fever, cough, and shortness of breath
 - Less frequently myalgia or severe sore throat
 - Reports of fatigue, headache, hemoptysis, diarrhea
- Radiologic findings
 - CXR bilateral, sometimes unilateral infiltrates
 - On chest CT, ground glass opacities with multiple areas of consolidation



CLINICAL COURSE DESCRIBED

- Asymptomatic/Mild course
- Acute decompensation
- Progressive worsening of symptoms
- Stable then crash--many may have even improved in the interim
- Duration ranges from days to weeks.
 - Median hospitalization at 5-6 days post first symptoms



TREATMENT

- Supportive treatment as for patients with any viral pneumonia
 - With addition of more strict infection control
 - No specific treatment
 - No known antiviral effectiveness
- Caution corticosteroids
 - May prolong viral replication in the respiratory tract and continuation of infection
 - Use only if indicated for another reason, e.g. treatment of COPD
- Uncertain roles of Hydroxychloroquine/Chloroquine/Remdesivir/Actemra/etc.



CLINICAL COURSE AND COMPLICATIONS

- Fever may be prolonged
- Potential for clinical deterioration in late 1st week/early 2nd week in some patients
- Complications
 - Acute Respiratory Distress Syndrome
 - Secondary infection in up to 10% of cases
 - Oxygen or Respiratory support needed in 25-33%
 - Acute cardiac injury



CLINICAL COURSE IN NURSING FACILITIES

TABLE. Characteristics of patients with COVID-19 epidemiologically linked to facility A among residents of King and Snohomish counties — Washington, February 27–March 9, 2020

Characteristics	No. (%)			
	Resident (n = 81)	Health care personnel (n = 34)	Visitor (n = 14)	Total (n = 129)
Median age, yrs (range)	81 (54–100)	42.5 (22–79)	62.5 (52–88)	71 (22–100)
Sex				
Men	28 (34.6)	7 (20.6)	10 (71.4)	45 start highlight(34.9)end highlight
Women	53 (65.4)	27 (79.4)	4 (28.6)	84 (65.1)
Hospitalized				
Yes	46 (56.8)	2 (5.9)	5 (35.7)	53 start highlight(41.1)end highlight
No	3 (3.7)	30 (88.2)	9 (64.3)	42 (32.6)
Unknown	32 (39.5)	2 (5.9)	0	34 (26.4)
Died				
Yes	22 (27.2)	0	1 (7.1)	23 (17.8)
No	59 (72.8)	34 (100.0)	13 (92.9)	106 (82.2)



COVID 19 IN NURSING HOMES - WHAT WE KNOW

- Many residents may be asymptomatic or mildly symptomatic.
- National data suggest up to 30% of symptomatic COVID positive nursing home residents will die from the disease (depends on testing strategies).
- There is no cure currently for COVID-19.
- 65% of deaths in DE are related to long term care residents, about half are dying in nursing homes and others post hospitalization.



RISK STRATIFICATION: CALL TOOL (CHINA)

- Based on these factors, the researchers developed the CALL scoring model, which assigned 4 points for comorbidity (1 point without); 3 points for age >60 years (1 point for younger age); 3 points for lymphocyte count below 1 billion per liter (1 point for higher lymphocyte counts); and 2 points for LDH 200-500 U/L or 3 points for LDH >500 U/L (1 point for LDH 250 U/L or lower).
- Overall, this model was 91% accurate for differentiating between patients who did and did not progress. The positive predictive value (PPV) was 50.7% and the negative predictive value (NPV) was 98.5% using a cutoff score of 6 points. With a cutoff score of 9 points, the PPV was 78.3% and the NPV was 11.9%.
- The researchers further classified CALL scores into 3 risk levels: 4-6 points were associated with less than 10% probability of progression (low risk); 7-9 points were associated with 10%-40% probability of progression (intermediate risk); and 10-13 points were associated with over 50% probability of progression (high risk). [p. 9, para. 3]

OTHER TOOLS MAY BE AVAILABLE TO RISK STRATIFY TO PREPARE FOR END OF LIFE DISCUSSIONS



OTHER RESOURCES FOR END-OF-LIFE CARE

- VITALtalk COVID Communication Skills Playbook:
- <https://www.vitaltalk.org/guides/covid-19-communication-skills/>
- VITALtalk videos on Vimeo: (outpatient and vent withdrawal in crisis)
<https://vimeo.com/401221011> (outpatient)
<https://vimeo.com/401465080> (goals of care)*
<https://vimeo.com/401476560> (helping families say goodbye on the phone)*



VIDEO ON ADVANCE CARE DISCUSSIONS FOR COVID-19

- <https://www.optimistic-care.org/probari/covid-19-resources/>



CPR GUIDANCE DURING THE COVID-19 PANDEMIC AMDA

APRIL 8,2020

- **Don PPE including an N95 respirator mask, gown, and face shield BEFORE initiating CPR.** Initiate CPR only after PPE is donned.
- **Spread a clear plastic sheet over the patient , including the patient's head.**
- **Ensure that only the minimum number of essential healthcare professionals with appropriate PPE are present in the room while CPR is being administered.**
- **If ventilation is to be conducted, utilize a bag-valve mask UNDER the plastic sheet, and ensure that everyone in the room is wearing an N95.** If N95 respirator masks are unavailable, perform hands-only CPR without ventilation until EMS arrives.
- **Close the door to the resident room before performing CPR.** Move other residents away from the area, e.g., hallways and transportation routes out of the facility.



PERSONAL PROTECTIVE EQUIPMENT

- Consistent with contact (gowns and gloves) and droplet (procedure/surgical mask) precautions, all other direct contact with residents who are presumed/known COVID-19 infected should not require an N95 respirator.
- Hand hygiene should be performed immediately after and before contact.
- Eye covering lowers risk further
- N95 use during aerosolizing procedures

We recognize this is a departure from standard infection prevention; however, we find ourselves in *extraordinary times* and given current circumstances, we believe this deviation from standard policy is warranted.

Discard damaged, visibly soiled, torn or saturated masks.

ISOLATION PRECAUTIONS AND PPE USE (by staff role)

Personnel	Patient type	Procedure	Mask	PPE	Isolation (Y/N)
Direct care staff *Should be wearing a medical/surgical mask at all times during the shift	Asymptomatic or screened negative	Routine patient care tasks or routine patient contact	Medical/surgical mask	Gloves and mask	NO
	Symptomatic or pending test results and	Routine patient care tasks	Medical/surgical mask	Gloves, gown, medical/surgical mask, eye protection	YES - Place on isolation precautions
	Confirmed COVID-19	Performance of aerosol inducing procedures	N-95 mask	Gloves, gown, N95 mask, eye protection	YES - Place on isolation precautions
All other staff / employees *Should be wearing a non-medical cloth mask at all times during the shift	With no patient contact *if staff has patient contact - use direct care staff recommendations above	n/a	Non-medical cloth	Cloth mask and gloves as needed depending on task.	n/a



Proper use of PPE/ Donning & Doffing PPE

<https://www.youtube.com/watch?v=84CydmuHxD8>



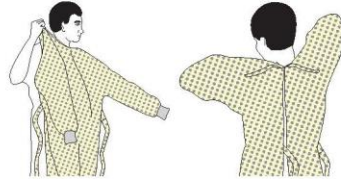
PERSONAL PROTECTIVE EQUIPMENT *Must Watch Video*

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



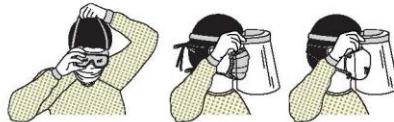
2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



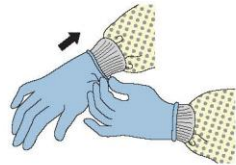
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



To
Review:

Donning



Doffing

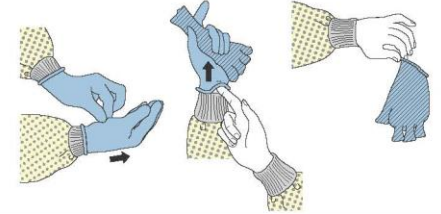


HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



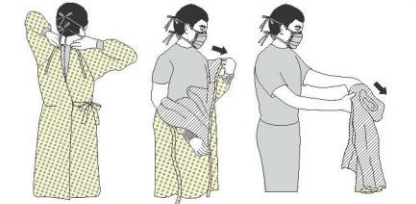
2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



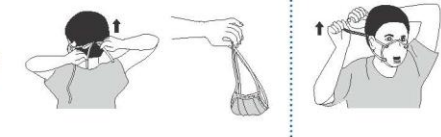
3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

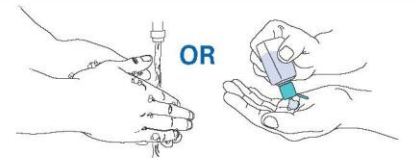


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — **DO NOT TOUCH!**
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



PPE CONSERVATION

PLEASE REVIEW GUIDANCE FOR PPE CONSERVATION:

- <https://www.dhss.delaware.gov/dhss/dph/php/alerts/dhan427.html>
- <https://www.dhss.delaware.gov/dhss/dph/php/alerts/dhan426.html>
- <https://www.dhss.delaware.gov/dhss/dph/php/alerts/dhan425.html>
- <https://www.dhss.delaware.gov/dhss/dph/php/alerts/dhan424.html>



PERSONAL PROTECTIVE EQUIPMENT

SURGICAL MASK USE AND RE-USE

To Doff facemask with intent to reuse:

1. Perform hand hygiene
2. Remove mask
 - Remove procedure mask by holding the ear loops. The front is contaminated, so remove slowly and carefully.
 - Remove surgical mask by untying lower ties FIRST. Untie upper ties last. The front is contaminated, so remove slowly and carefully.
3. After removing facemask, visually inspect for contamination, distortion in shape/form. If soiled, torn, or saturated the mask should be discarded.
4. If the facemask is NOT visibly soiled, torn, or saturated, facemasks should be carefully folded so that the outer surface is held inward and against itself to reduce contact with the outer surface during storage. The folded mask can be stored between uses in a clean sealable paper bag or breathable container.

PERSONAL PROTECTIVE EQUIPMENT

SURGICAL MASK USE AND RE-USE

To Re-Don Mask:

1. Perform hand hygiene.
2. Grasp mask – DO NOT touch the front of the mask.
Pinch procedure mask at the ear loops or
Grasp upper ties on surgical mask.
3. Place over face.
For procedure mask: Secure ear loops behind the ears.
Secure mask.
For surgical mask: Secure upper ties first, behind head. End
by securing lower ties behind head.
4. Perform hand hygiene.

**A disposable facemask
can be worn
throughout your shift
if not visibly soiled,
torn or saturated, and
NOT touched while
delivering patient care.**



*The Invisible
Challenge:*
**The Spread of
Bacteria in Health
Care Settings**

<https://www.youtube.com/watch?v=9R8fHo6WfzY&feature=youtu.be>



SPREAD OF BACTERIA *Must Watch Video*

CONSIDERATIONS FOR TRANSFER

Potential Indications for Transfer for COVID-19

- Due to the dynamic nature of the COVID-19 pandemic and emerging evidence, this guidance is subject to change.
- This guidance is to be used for non-emergency transfer indications only. Emergency transfers should be undertaken per existing facility protocols.
- Due consideration should be given for alternative diagnoses and interventions undertaken as appropriate.
- DNR/DNH/DNI directives should be revisited frequently and resident goals of care addressed.
- Decision for transfer should be made after evaluation by an independently-licensed practitioner.
- Nothing in this guidance should be interpreted as to override the clinical judgment of the independently licensed practitioner responsible for the patient.



CONSIDERATIONS FOR TRANSFER

Vitals

- $HR \geq 120$ or $\geq 25\%$ increase from baseline
- $SBP < 90$ or $\geq 20\%$ decrease from baseline
- $RR \geq 28$
- $SpO_2 < 94\%$ on 4L O_2 or $\geq 4\%$ decrease from baseline $\geq 94\%^{1,2}$
- Core Temperature < 95 degrees Fahrenheit
- Altered Mental Status



CONSIDERATIONS FOR TRANSFER

Labs (if performed)³

- Increase in Creatinine ≥ 2 x baseline
- Anion Gap ≥ 24
- Metabolic abnormalities not improved despite appropriate intervention or causing evidence of systemic insult
- Evidence of progressive end-organ damage
- EKG changes



CONSIDERATIONS FOR TRANSFER

Ability to Care

- Resident has needs beyond facility capabilities
- Resident is anticipated to have worsening disease course requiring resources or expertise not available at facility.
- Facility has implemented and exhausted all appropriate care measures



CONSIDERATIONS FOR TRANSFER

Footnotes

- ¹Rising oxygen requirements may be considered highly suggestive of imminent deterioration and practitioners should strongly consider escalation of care to settings where advanced oxygenation or ventilation modalities are available, when appropriate.
- ²If facility has limited oxygen-delivery capabilities, or practitioner anticipates resident oxygen needs outstripping available resources, early transfer should be considered, where appropriate.
- ³This guidance does not encompass all laboratory data which may be available to the practitioner. For example, highly elevated inflammatory markers (e.g. CRP, ferritin, etc.) may be sensitive markers for severe disease course.



TESTING

Review guidance for testing within the State of Delaware:

https://coronavirus.delaware.gov/wp-content/uploads/sites/177/2020/04/Evaluating-and-Testing-Persons-for-COVID-19_Guidance-for-Providers-1.pdf

Per Executive Order, test shall not be required test for COVID-19 shall not be required prior to a resident's return to a facility.

DPH may apply rapid lateral flow immunoassay testing in select outbreak investigations, as organized by the Office of Infectious Disease Epidemiology



RETURN TO FACILITY

- Review guidance on Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 to Long-Term Care or Assisted Living Facilities :

<https://coronavirus.delaware.gov/wp-content/uploads/sites/177/2020/04/Discontinuation-of-Covid-19-Precautions-for-Long-Term-Care-Facilities.pdf>



ADVANCE CARE PLANNING

- ADVANCE CARE PLAN TOOL
- Advance care planning, when rendered with patient-centered care, advocates the patient's wishes in medical decision making. Because of the unique challenges posed by the Covid-19 Pandemic for residents of Post-Acute and Long Term Care settings and their families, AMDA – The Society for Post-Acute and Long Term Care offers this Advance Care Plan (ACP) Tool. For more information on ACP in the Post-Acute/Long Term Care Setting and to learn about the AMDA ACP Toolkit, visit <https://paltc.org/product-store/advance-care-planning-acp-series>.



STATE HEALTH OPERATIONS CENTER (SHOC) POST ACUTE CARE TEAM

All Questions related to Post Acute Care Facilities should be directed to the **SHOC Post Acute Care Team**.

The Team can be reached by:

- Calling the Division of Public Health Call Center at 1-866-408-1899 and press option 2
- Emailing the Post Acute Care Team at DPH_PAC@Delaware.gov



ADDITIONAL RESOURCES

Train/educate staff who will be conducting screening into the building

- Screen staff prior to facility entry: https://coronavirus.delaware.gov/wp-content/uploads/sites/177/2020/03/Essential-Services-Screening-Policy_3.22.20.pdf

Facility Signage

- Recommend posting COVID-19 signage: <https://coronavirus.delaware.gov/wp-content/uploads/sites/177/2020/03/COVID-Business-Sign-1.pdf>

Personal Protective Equipment

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/face-masks.html>;
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>

Check the following link regularly for critical updates, such as updates to guidance for using PPE: <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/controlrecommendations.html>.

